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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,776	06/29/2001	Wolfgang Horn	00 P 14945 US	8889

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EXAMINER

PHAM, THOMAS K

ART UNIT PAPER NUMBER

2121

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/896,776

Applicant(s)

HORN ET AL.

Examiner

Thomas K Pham

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

1. This action is in response to request for continued examination filed on 8/24/2004.
2. Applicant's arguments with respect to claims 16-32 have been considered but are moot in view of the new ground(s) of rejection.

Quotations of U.S. Code Title 35

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim Rejections - 35 USC § 102

7. Claims 16-19, 21-23 and 25-26, 30 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent no. 6,282,455 ("Engdahl").

Regarding claim 16

Engdahl teaches an industrial controller comprising a plurality of devices, for use in controlling a system including a plurality of components, the controller comprising:

- control means independent of the controlled components (col. 3 lines 58-62, "an industrial control system 10 ... a communication adapter 18") and
- component control means relating to the controlled components for supplementing the control means, the component control means implemented using a plurality of technology objects corresponding to the components, the technology objects distributable on the devices (col. 5 lines 52-59, "The virtual environment represented ... the object and the node").

Regarding claim 17

Engdahl teaches automatically generated communications links between at least two of the technology objects (fig. 2 shows communication link 26 connects the objects in a network environment)

Regarding claim 18

Engdahl teaches technology objects comprise attributes taken into account in the generation of the communications links (col. 6 lines 1-10, "The nodes of the present invention ... between methods of the nodes").

Regarding claim 19

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Engdahl teaches technology objects are distributable on a plurality of devices within a project, the project relating to plurality of control units (fig. 2 shows the distribution of objects 34 and their relationship).

Regarding claim 20

Engdahl teaches the functionality of the technology objects is distributed among control units in equidistant communication with one another in real time with clock synchronization (col. 7 lines 3-7, “A watch tool 70 is used ... the factory may be desired”).

Regarding claim 21

Engdahl teaches the technology object types permit technological scaling of the functionality of the controller (col. 5 lines 60-65, “The node 64 for the ... aspects of the machine 34”).

Regarding claim 22

Engdahl teaches technology objects are interleaved to form container objects (col. 2 lines 17-20 “These spatial “object” may ... another dimension of organization”).

Regarding claim 23

Engdahl teaches further adapted to provide a plurality of views of the technology objects to a user (col. 2 lines 9-14, “creates an intuitive multi-viewed ... dimensional spatial coordinate”).

Regarding claim 24

Engdahl teaches further adapted for feedback-free programming of a technology object with respect to the other technology objects and the control means. (fig. 2 displayed a feedback-free environment of the control system).

Regarding claim 25

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Engdahl teaches technology objects are represented in the engineering system by graphical elements (col. 5 lines 5-14, “A principal feature of the ... from the input device 24”).

Regarding claim 26

Engdahl teaches the technology objects have types and the technology object types are clustered into one or more technology packages (col. 2 lines 50-58, “The images displayed may ... a flow of data between machines”).

Regarding claim 27

Engdahl teaches a method of programming an industrial control system comprising a plurality of devices, the controller being programmed for one or more projects and comprising a plurality of technology objects, the method comprising the steps of:

- providing a technology-neutral control system (col. 3 lines 9-15, “to provide a powerful human/machine ... and images of machines”);
- interleaving of the technology objects to form a set of complex technology objects (col. 2 lines 17-20 “These spatial “object” may ... another dimension of organization”);
- distributing a plurality of the technology objects on a plurality of the devices (col. 5 lines 60-67, “The node 64 for the ... provided by the node editor”);
- reusing at least one of the complex technology objects in a second project (col. 7 lines 30-33, “The node editor 78 ... is well-known in the art”).

Regarding claim 28

Engdahl teaches attributes of the technology objects are taken into account in generating the communication channels (col. 6 lines 1-10, “The nodes of the present invention ... between methods of the nodes”).

Regarding claim 29

Engdahl teaches a method of programming an industrial control system comprising a plurality of devices, the controller being programmed for one or more projects and comprising a plurality of technology objects, the method comprising the steps of:

- providing a technology-neutral control system (col. 3 lines 9-15, “to provide a powerful human/machine ... and images of machines”);
- instantiating the technology objects (col. 2 lines 50-58, “The images displayed may include ... data between machines”);
- interleaving the technology objects to form a set of complex technology objects for a first project (col. 2 lines 17-20 “These spatial “object” may ... another dimension of organization”);
- distributing the technology objects on a plurality of the devices (col. 5 lines 60-67, “The node 64 for the ... provided by the node editor”);
- generating communication channels between the technology objects (col. 6 lines 1-10, “The nodes of the present invention ... between methods of the nodes”);
- reusing at least one of the complex technology objects in a second project (col. 7 lines 30-33, “The node editor 78 ... is well-known in the art”).

Regarding claim 30

Engdahl teaches a method for programming an industrial controller for a technical process, the method comprising the steps of:

- selecting a plurality of technology objects relevant to a desired application (col. 3 lines 3-8, “The interface”);

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- interleaving the selected technology objects to form technology objects having complex functionality (col. 2 lines 17-20 “These spatial “object” may ... another dimension of organization”); and
- distributing the interleaved technology objects onto a device (col. 5 lines 60-67, “The node 64 for the ... provided by the node editor”).

Regarding claim 31

Engdahl teaches interleaved software objects may be re-used in a subsequent application (col. 3 lines 9-15, “to provide a powerful human/machine ... and images of machines”).

Regarding claim 32

Engdahl teaches a system for programming an industrial controller, comprising:

- an industrial control system (fig. 1, element 10);
- means for selecting a plurality of technology objects relevant to a desired application (col. 3 lines 3-8, “The interface”);
- means for interleaving the selected technology objects to form technology objects having complex functionality (col. 2 lines 17-20 “These spatial “object” may ... another dimension of organization”); and
- means for distributing the interleaved technology objects onto a plurality of devices (col. 5 lines 60-67, “The node 64 for the ... provided by the node editor”).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday - Friday from 8:00 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.


Any response to this office action should be mailed to: **Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450**. Responses may also be faxed to the **official fax number (703) 872- 9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas Pham
Patent Examiner

TP

November 4, 2004


Anthony Knight
Supervisory Patent Examiner
Group 3600